

# SQL Querying Beginner (incl MTA)

## Prerequisites

None

## Intended Audience

- This Beginning SQL Querying training course is for anyone who wants to get into the world of Database Developers / Administrators or Business Intelligence.
- Some familiarity with spreadsheets, relational databases and basic SQL might be helpful. Some coding experience might be helpful.
- This is also the first course in the [MCSA](#) track.

## After this course you should

- Know SQL syntax
- Know SQL database design concepts
- Know advanced querying
- Know how to do hard core database manipulation with Subqueries, Joins and Transactions
- Understand effective and efficient database design and creation
- Be able to query, normalize and join data
- Be ready to prepare for the MTA DBA Fundamentals Exam 98-364

## Alignment

This course is generally presented in MySQL, and also covers MS SQL 's MTA Certification. We guide and support you on the preparation of MTA exam. (MTA Exam not included in course price)

## **Further Training**

- Consider doing our [Advanced SQL Querying](#) or [DB Design](#)

## **Course Material**

- Course material included.

## **Course Contents**

### Day 1:

- Data and Tables – a place for everything
  - Data in categories
  - What's in a Database
- CREATE TABLE Statement
  - Data types
  - DESCRIBED
- INSERT Statement
- NULL, NOT NULL
  - DEFAULT
- The SELECT Statement – gifted data retrieval
  - How to query data types
  - Comparison Operators
- AND, OR, LIKE, BETWEEN, IN, NOT IN

### Day 3:

- Advanced SELECT – Seeing your data with new eyes
  - CASE expression
    - ORDER BY
  - SUM, MIN, MAX, AVG, GROUP BY
  - COUNT, LIMIT
- Multi-table Database Design – Outgrowing your table
  - Schema
    - How to go from one table to two
  - Create a table with a Foreign Key
    - Relationships between tables
      - Patterns of data
      - Junction table
        - 1NF
    - Partial functional dependency
    - Transitive functional dependency
      - 2NF
      - 3NF

### Day 5:

- Constraints, Views and Transactions
  - CHECK CONSTRAINT
  - Creating a view
- Inserting, updating and deleting with views
  - View with CHECK OPTION
    - Transactions
    - The ACID Test
  - Security – protecting your assets
    - GRANT statement
    - GRANT variations
    - REVOKE privileges
  - REVOKING a used GRANT OPTION
  - MTA-Exam 98-364 Review Prep
  - Comptency Assesment Project

### Day 2:

- DELETE and UPDATE – a change will do you good
  - Smart table design – why be normal?
    - Atomic data
    - Primary Key
  - ALTER – Rewriting the past
    - Renaming the table
    - DROP column
    - UPDATE, SET

### Day 4:

- JOINS and multi table operations
- CREATE, SELECT, INSERT at the same time
  - AS, column aliases
  - Inner JOINS
- Subqueries – Queries within queries
  - Natural Join
  - Noncorrelated subqueries
  - Correlated subqueries
  - EXISTS and NOT EXISTS
- OUTER JOINS, SELF JOINS and UNIONS
  - Left and right outer join
- A self-referencing foreign key
  - INTERSECT and EXCEPT
- Turning a subquery into a join

## Duration and pricing

- [In Price Group B](#)

## Certificate

Read about our [certificates](#)

## Questions

Please [email us](#)

## Schedule for Johannesburg

On the calendar on this page below.

If your browser doesn't display the calendar below, please click on [this link](#) or try using [Google Chrome](#), alternatively please enquire via our '[Contact Us](#)' page.